REMARKS/ARGUMENTS

The Applicants have carefully considered this application in connection with the Examiner's Action and respectfully request reconsideration of this application in view of the following remarks.

The Applicants originally submitted Claims 1-20 in the application. In a previous response to a restriction requirement, the Applicants elected, with traverse, Claims 1-16, comprising Group II. Currently, the Applicants have canceled Claims 17-20 without prejudice or disclaimer in response to the restriction requirement, and have neither amended nor added any other claims. Accordingly, Claims 1-16 are currently pending in the application.

I. Rejection of Claims 1-16 under 35 U.S.C. §103

The Examiner has rejected Claims 1-16 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,546,480 to Burnham, *et al.* (Burnham) in view of the foreign Patent No. WO 97/50133 to DePoorter (DePoorter). Independent Claims 1 and 9 currently include the element that an undoped layer be located over an active region, a barrier region including aluminum be located over the undoped layer, and a doped upper cladding layer be located over the barrier region. Neither Burnham nor DePoorter teaches or suggests such elements.

In contrast to that claimed, Burnham is directed to an injection laser having quantum size effect transparent waveguiding. (Title) Burnham teaches that the laser includes an active layer 36 located on a lower cladding layer 34, wherein the active layer 36 has an upper cladding layer 41 formed thereon. (See FIG. 2 and column 4, lines 20-60). Burnham teaches that the active layer 36 may include an active region 38. In an alternative embodiment, Burnham teaches that the active

layer 36 may comprise multiple quantum well passive regions 36.1. (Column 5, lines 45-48). Burnham further teaches that the device of FIG. 4 is identical to that of FIG. 2, except that the active layer 36 of FIG. 4 comprises the aforementioned quantum well passive regions. Burnham then teaches that a content layer 46 may be located on the upper cladding layer 41. As Burnham teaches that its upper cladding layer 41 is located directly on its active layer 36, it cannot teach or suggest that an undoped layer and a barrier region be located therebetween. Accordingly, Burnham fails to teach or suggest such elements.

DePoorter fails to correct the deficiencies of Burnham. The Examiner is offering DePoorter for the sole proposition that the upper cladding layer may be doped with zinc. Notwithstanding the accuracy of the Examiner's assertion, a teaching of doping an upper cladding layer with zinc is far from that which is presently claimed in independent Claims 1 and 9. Accordingly, DePoorter also fails to teach or suggest the element that an undoped layer be located over an active region, a barrier region including aluminum be located over the undoped layer, and a doped upper cladding layer be located over the barrier region.

Thus, Burnham, individually or in combination with DePoorter, fails to teach or suggest the invention recited in independent Claims 1 and 9 and their dependent claims, when considered as a whole. Accordingly, the combination fails to establish a prima facie case of obviousness with respect to Claim 1 and 9. Claims 2-8 and 10-16 are therefore not obvious in view of Burnham and DePoorter.

In view of the foregoing remarks, the cited references do not support the Examiner's rejection of Claims 1-16 under 35 U.S.C. §103(a). The Applicants therefore respectfully request the Examiner withdraw the rejection.

II. Rejection of Claim 17-20 under 35 U.S.C. §103

The Examiner has rejected Claim 17-20 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,212,704 to Chen, *et al.* (Chen) in view of Burnham. As established above, Burnham fails to teach or suggest the element that an undoped layer be located over an active region, a barrier region including aluminum be located over the undoped layer, and a doped upper cladding layer be located over the barrier region.

Chen fails to correct the deficiencies of the Burnham reference. The Examiner is only asserting the Chen reference for the sole proposition that the electronic device taught by Burnham may be included within an optical fiber communications system having a transmitter and a receiver connected by an optical fiber. Notwithstanding the accuracy of the Examiner's assertion, such a teaching is far from that which is presently claimed in independent Claims 1 and 9. Accordingly, Chen also fails disclose all the features of the present invention.

Thus, Chen, individually or in combination with Burnham, fails to teach or suggest the invention recited in independent Claims 1 and 9 and their dependent claims, when considered as a whole. Accordingly, the combination fails to establish a prima facie case of obviousness with respect to Claim 1 and 9. Claims 17-20 are therefore not obvious in view of Chen and Burnham.

In view of the foregoing remarks, the cited references do not support the Examiner's rejection of Claims 17-20 under 35 U.S.C. §103(a). The Applicants therefore respectfully request the Examiner withdraw the rejection.

III. Conclusion

In view of the foregoing amendment and remarks, the Applicants now see all of the Claims currently pending in this application to be in condition for allowance and therefore earnestly solicit a Notice of Allowance for Claims 1-16.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "**Version with markings to show changes made.**"

The Applicants request the Examiner to telephone the undersigned attorney of record at (972) 480-8800 if such would further or expedite the prosecution of the present application.

Respectfully submitted,

HITT GAINES & BOISBRUN, P.C.

Greg H. Parker
Registration No. 44,995

Dated: 10-25-02

P.O. Box 832570
Richardson, Texas 75083
(972) 480-8800

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

(1) Kindly cancel Claims 17-20 without prejudice or disclaimer.